



# UNITED STATES PATENT AND TRADEMARK OFFICE

51  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/227,398	01/08/1999	KENT K. LEUNG	CISP077	8362
22434	7590	09/23/2004	EXAMINER	
BEYER WEAVER & THOMAS LLP P.O. BOX 778 BERKELEY, CA 94704-0778			MEHRPOUR, NAGHMEH	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/227,398	LEUNG, KENT K.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Naghmeh Mehrpour	2686	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/6/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,7,12-14,18 and 22-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,7,12-14,18 and 22-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/6/04 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-4, 7, 12-14, 18, 22-26, 32, 37-38, 41-45, 47-55**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai et al (US Patent Number 6,377,982 B1) in view of Short et al. (US Patent 6,636,894 B1).

Regarding **Claims 1, 3, 13, 23, 37, 43**, Rai teaches a network device which supports mobile IP is configured to send an accounting request, the accounting request identifying a mobile node (col 6 lines 33-41), the network device comprising:

a memory (see figure 22, raw accounting data Buffer);

a processor coupled to the memory (see figure 22), wherein the network device and plurality of mobile nodes each of the plurality of network devices a Home Agent or a Foreign Agent (see figure 15) adapted for sending an accounting request to the server being a Home Agent or a Foreign Agent adapted for sending an accounting request to the server (see figure 22) associated with a mobile node supported by a plurality of Home Agents (see figure 1, col 6 lines 18-41, lines 45-55, col 7 lines 38-57), and each of the plurality of network devices a Home Agent or a Foreign Agent sending information to the server to update accounting information associated with a mobile node (col 23 lines 28-50), the network device adapted for sending the accounting request to a server in response to a trigger event identifying the mobile node initiation or termination of a registration of the mobile node (col 23 lines 30-60), wherein **the server configured to maintain accounting information for a plurality of mobile supported by a plurality of network devices, the accounting information being received from the plurality of network devices, each of plurality of network devices being a Home Agent or a foreign agent supporting mobile IP** (col 6 lines 18-41, lines 45-55, col 7 lines 38-57 col 23 lines 30-60). Rai fails to teach the trigger event including the counter associated with the mobile's node's activity **during a session**, the trigger being a lapse of a predetermined period of time and wherein the server is not a Home agent or a foreign agent. However Short teaches computer network trigger event including the counter, the trigger being a lapse of a predetermined period of time and wherein the server is not a Home agent or a foreign agent (col 11 lines 51-64). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Short with Rai, in order to enable the corporate users

Art Unit: 2686

accessing network from home or road, while the end users only pay for the cost of connecting to corporate remote access.

Regarding **Claims 2, 25, 29**, Rai teaches a network device received and send packets by the mobile node (col 7 lines 45-54), and each of the plurality of network devices a Home agent sending information to the server to update (col 43 lines 40-63). Rai fails to teach a counter that counts a total service time for the mobile node. However Short teaches a system wherein teach a counter that counts a total service time for the mobile node (col 11 lines 51-64). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Short with Rai, in order to keep track of number times that system registers. Short teaches a counter, a service establishments and the Point to Point protocol (PPP) connections between the gateway device and public and private domains within the network. The counter is capable of tracking the duration of sessions and connections and the byte-count associated with the specified session or connection (col 10 lines 20-27). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Short with Rai, in order to keep track of number times that system registers, in order to provide compatibility with the existing protocols.

Regarding **Claims 4, 14, 28, 38**, Rai teaches a server that is adapted for sending an accounting reply to the network device in response to the accounting request (col 6 lines 34-41), and accounting reply acknowledging logging of the accounting information pertaining to the mobile node (col 18 lines 3-11, col 19 lines 8-12).

Regarding **Claims 7, 18, 32, 41, 45**, Rai fails to teach a server wherein the counter indicates a number of registrations that have been accepted. However Short teaches a server wherein the

Art Unit: 2686

counter indicates a number of registrations that have been accepted (col 10 lines 14-35). These events include the user account log on, the service establishments and the Point to Point protocol (PPP) connections between the gateway device and public and private domains within the network. The counter is capable of tracking the duration of sessions and connections and the byte-count associated with the specified session or connection (col 10 lines 20-40). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Short with Rai, in order to keep track of number times that system registers.

Regarding **Claims 12, 22, 48, 52**, Rai teaches a server wherein the server is a RADIUS server (col 17 lines 50-65).

Regarding **Claims 24, 26**, Rai teaches a method further including forwarding the data packet to another network device (col 22 lines 46-57).

Regarding **Claims 42, 44**, Rai fails to teach a Network device wherein the accounting request further includes a value associated with the counter. However Short teaches a counter, a service establishments and the Point to Point protocol (PPP) connections between the gateway device and public and private domains within the network. The counter is capable of tracking the duration of sessions and connections and the byte-count associated with the specified session or connection (col 10 lines 20-40, col 11 lines 51-64). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Short with Rai, in order to keep track of number times that system registers.

Regarding **Claims 49-51**, Rai teaches a network wherein the server is a AAA server and accounting request is sent in accordance with a AAA server protocol (col 23 lines 30-60).

Art Unit: 2686

Regarding **Claims 53-55**, the combination of Rai modified by Short fails to teach the network device wherein the server does not support Mobile IP. However the Examiner takes official notice a network wherein does not support Mobile IP node, is well known in the art. Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of with the combination of Rai with Short, in order to enable the corporate users accessing network from home or while on the road, while the end users only pay for the cost of connecting to corporate remote access.

4. **Claims 27-29, 36, 39-40, 56**, are rejected under 35 U.S.C. 103(a) as being unpatentable over Short et al. (US Patent 6, 636,894 B1) in view of Rai et al (US Patent Number 6,377,982 B1).

Regarding **Claims 27, 39**, Short teaches computer-readable medium that does **not** support IP, the **AAA server configured to maintain accounting information for a plurality of mobile supported by a plurality of network devices, the accounting information being received from the plurality of network devices, each of plurality of network devices being a Home Agent or a foreign agent supporting mobile IP (col 9 lines 5-25), a method of updating accounting information for a mobile node operating according to Mobile IP protocol (col lines 53-56) comprising:**

receiving a request packet from a network device operating under Mobile IP Protocol, the request packet being sent in accordance with a AAA server protocol (col 5 lines 15-30), the request packet identifying the mobile node and including at least one counter associated with accounting information pertaining to mobile node (col 11 lines 51-64), a total service time for the mobile node, indicating at least one of a number of packets that have been sent from the mobile

Art Unit: 2686

node, a total time for the mobile node (col 10 lines 20-40), number of bytes that have been sent to the mobile node and a number of bytes that been sent from the mobile node (col 10 lines 20-40); and

instructions logging the accounting information for the mobile node identified in the request packet using the at least one counter of the request packet (col 11 lines 44-60).

Short fails to teach that the network device being a Home Agent or foreign Agent supporting the mobile node. However Rai teaches a communication system wherein Mobile IP standard are commonly referred to as a foreign agent (FA) (col 7 lines 33-46). Therefore, it would have been obvious to the ordinary skill in the art at the time the invention was made to combine the above teaching of Rai with Short, in order to provide low cost deployment, ease of maintenance and ability to degrade gracefully under heavy load condition.

Regarding **Claims 28, 40**, Short teaches a that is adapted for sending an accounting reply to the network device in response to the accounting request (col 8 lines 31-42), and accounting reply acknowledging logging of the accounting information pertaining to the mobile node (col 10 lines 20-40).

Regarding **Claim 29**, Short teaches a method further comprising: generating a bill for Mobile IP service from the accounting information (col 10 lines 20-39).

Regarding **Claim 56**, Short teaches a method wherein the server is not a Home Agent or a Foreign Agent (col 5 lines 15-30).

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-4, 7, 12-14, 18, 22-29, 36-45, 47-56, have been considered but are moot in view of the new ground(s) of rejection.



***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 703-308-7159. The examiner can normally be reached on 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (703) 305-4379.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

September 18, 2004

MELODY MEHRPOUR  
PATENT EXAMINER

